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FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

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IN REPLY REFER TO:

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

93-61

Honorable Barbara Boxer  
United States Senator  
1700 Montgomery Street  
Suite 240  
San Francisco, California 94111

Dear Senator Boxer:

This is in response to your facsimile dated November 3, 1993, requesting information regarding an FCC rule making proceeding concerning use of the 902-928 MHz band. Your inquiry was prompted by correspondence from your constituent, Douglas Lau, president of Tatung Telecom, expressing concern about the future availability of this frequency band for use by manufacturers and users of Part 15 devices. For your information I have enclosed a copy of the Notice of Proposed Rule Making in PR Docket No. 93-61. Following is a brief description of the use of the 902-928 MHz band and a brief summary of the Notice.


The 902-928 MHz band is shared by various user groups. In order to effectively manage the shared use of this spectrum, priorities for access to this band have been established among these groups. Users with lower priority must accept interference from and may not cause interference to users that have a higher priority. The 902-928 MHz band is primarily allocated for use by the Federal Government for Radiolocation, Fixed and Mobile services; these Federal Government users must, however, accept interference from Industrial, Scientific, and Medical (ISM) devices. Following both the Federal Government and ISM devices on the priority scale are Automatic Vehicle Monitoring (AVM) systems. Next are Amateur radio operators and finally, Part 15 users that are eligible to operate in this band. Because they have the lowest priority, Part 15 users must accept interference from and are not permitted to cause interference to any of the other users in this band. The order of priorities for users of this band has been in effect for nearly 20 years.

In PR Docket No. 93-61 the FCC has proposed certain changes to rules pertaining to AVM systems operating in the 902-928 MHz band. See, Notice of Proposed Rule Making, PR Docket 93-61, 8 FCC Rcd 2502 (1993). Uses for AVM systems include locating and tracking fleets of vehicles, locating stolen vehicles, alerting authorities to emergencies, automated toll collection, and freight tracking. Currently, such systems are licensed in the 904-912 and 918-926 MHz sub-bands. In PR Docket 93-61 the Commission proposes that such systems be licensed throughout the entire 902-928 MHz band and that they be

permitted to locate persons as well as vehicles. The Commission also recognizes the difficulty various users, including your constituent, may have in sharing this band and have therefore requested comment on ways that sharing may be more easily facilitated. The Commission has not, however, proposed any changes in the status of or restrictions on the use of Part 15 devices in this band at this time.

As your constituent has noted, North American Teletrac and Location Technologies (Teletrac), in a joint venture with Pacific Telesis, is an AVM licensee and did file the Petition for Rule Making that precipitated adoption of the Notice. Approximately 85 entities, however, filed extensive comments expressing their viewpoints on how to resolve the various and complex issues raised in the Notice. Many commenters' views differ in a number of respects from those offered by the Commission, and the Commission gives full consideration to the views expressed by all interested parties. We are currently preparing a Report and Order that will establish the Commission's rules and policies with regard to AVM systems and hope to announce the adoption of this Report and Order in the near future.

I thank you for your interest in this matter. I trust this is responsive to your concerns.

Sincerely,  
  
for Ralph A. Haller  
Chief, Private Radio Bureau

Enclosure

11/03/93

12:47

415 403 0100

SEN BOXER

+++ FCC OLA

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**FAX FROM**  
**U.S. SENATOR BARBARA BOXER**

**SAN FRANCISCO OFFICE**  
1700 Montgomery St., Suite 240  
San Francisco, CA 94111  
415-403-0100

DATE: 11/3/93

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COPIES TO: \_\_\_\_\_

FAX 415-956-6701

FROM: JANET ALLEN (415-403-0118)

NUMBER OF PAGES (incl. cover): 3

NOTES: Here is the correspondence  
we spoke about. Thank you  
very much for your assistance.

PRB  
PR-AVM  
4459

1060 Terra Bella Avenue  
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TEL: (415) 961-6193  
FAX: (415) 961-0244

## Tatung Telecom

October 21, 1993

Senator Barbara Boxer  
1700 Montgomery Street  
Suite 203  
San Francisco, CA 94111

Dear Senator:

We are a California corporation engaged in the development and sale of innovative wireless telecommunications equipment. We currently employ about 30 people here in Mountain View, and have plans to expand dramatically. These people come from all around the Bay.

Our business future is threatened, however, by action proposed to be taken by the Federal Communications Commission ("FCC"). The FCC is preparing to rule on a filing by Pacific Telesis that would grant them a license to use frequencies that are squarely in the middle of certain frequencies we have committed to use. Our commitment is evidenced by an R&D effort more than two years old to design hardware and related software that operates at these frequencies. This represents a substantial investment.

The frequencies our designs use are in the Industrial, Scientific & Medical ("ISM") portion of the spectrum at 902-928 Megahertz, which has long been allocated for unlicensed use on a non-interfering basis. That is, anyone can transmit on them, provided they avoid interference with each other. The ISM band is governed by Part 15 of the FCC's rules.

This has created an opportunity for entrepreneurial companies like ours to develop state-of-the art technologies to operate in this band. In Part 15, the FCC has specifically encouraged such development by defining how "spread spectrum" can be used at these frequencies. This spread spectrum approach is desirable for its ability to share frequencies with other users without interference.

In response, we have developed, but not announced, certain spread spectrum systems for operation in this band. These products will operate in and around offices, warehouses, malls, hospitals and other locations, public and private, to permit low-power voice and data communications to and from portable pocket-sized units. They can be used for multiple applications, including public safety.

Pacific Telesis, through its recently-acquired business unit called PacTel Teletrac proposes to deploy a single application using old-style technology using high power that would blot out low power transmissions like ours and render this band nearly useless for any application other than theirs. Under FCC rules, if they are granted a license, the users of our equipment would have to shut down anytime they (inevitably) interfere with Teletrac. Thus, it's the license we object to, since it gives Teletrac effectively exclusive use of the band. We wouldn't mind sharing the band with them if they would modify their system to coexist on an unlicensed basis like the rest of Part 15 equipment does.

The PacTel Teletrac application is vehicle location, which is a desirable service, but there are other ways to accomplish it, using better and more modern technology, that do not have the effect of wiping out the efforts of so many others. More modern technology used for vehicle location also has the benefit of much better conservation and reuse of the frequency spectrum, a valuable national resource.

Our plans to produce hundreds of thousands (and, hopefully, millions) of wireless units would help to create a new industry that does not exist today. But if we can't use these frequencies at 900 MHz, we will be forced to redesign everything to operate at frequencies that are much higher and more costly, resulting in a service that costs more and will not penetrate walls as well. That will set our development back at least a year and will call the economics of the whole project into question.

You may well ask how the FCC can be encouraging innovation in this unlicensed band and yet permit Teletrac to file for a license that would destroy it. The answer is that this seems to be a case of the left hand not knowing (or caring) what the right hand is doing. The private radio group of the FCC which is entertaining the Teletrac filing is a different part of the FCC from the one that is looking at Part 15 and the big picture. Yet, if we are not vigilant, this filing may slip by and get approved simply because everybody at the FCC is preoccupied with other matters (and nobody has been at the helm).

We ask your help in contacting the office of the Chairman of the FCC as well as the individual FCC Commissioners to express your concern over this needless disruption of a burgeoning California industry. For your convenience, we have included a draft of a letter expressing such concern. We hope you will send it or a similar letter. It will make a lot of difference to us and to our people. We'll post it on our bulletin board.

Sincerely,

  
Douglas Lau,  
President